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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/675,972

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EXAMINER

NGUYEN, DUSTIN

ART UNIT

PAPER NUMBER

2454

NOTIFICATION DATE

DELIVERY MODE

11/27/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/675,972	<b>Applicant(s)</b> EL MGHAZLI ET AL.	
	<b>Examiner</b> DUSTIN NGUYEN	<b>Art Unit</b> 2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This Office Action is responsive to Amendment filed 6/18/2009.

***Response to Arguments***

2. Applicant's arguments filed 06/18/2009 have been fully considered but they are not persuasive.
3. As per remarks, Applicants argued that (1) there is no teaching or suggestion that the active nodes of Wittmann consider information in active packets.
4. As to point (1), Wittmann clearly discloses a QF object is included in the received RESV message, the QF object is extracted and forwarded to the QF daemon, wherein the QF daemon is responsible for allocation and configuration of the QoS filter according to the requirements stated in the QF object [ i.e. the active nodes consider information in active packets as claimed ] [ page 898, section 3.3 "Basic Implementation Architecture" ].
5. As per remarks, Applicants argued that (2) there is no teaching or suggestion in Wittmann that the information in active packets relates to an execution environment of a respective active node.

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6. As to point (2), Wittmann discloses once received QF object, the QF daemon checks to determine whether other QoS requirements for that group have been received previously, therefore the QF daemon keeps some state information concerning filter requirements of group members [ i.e. the information in active packets relates to an execution environment of a respective active node as claimed ] [ page 898, section 3.3 "Basic Implementation Architecture" ].

7. As per remarks, Applicants argued that (3) there is not teaching or suggestion that the QF object constitutes an execution environment for the active data flow.

8. As to point (3), Wittmann provides example of how QF object configure or establish QoS parameter between active nodes for video stream [ i.e. QF object constitutes an execution environment for the active data flow as claimed ] [ page 899, section 3.3.1. "Example" ].

9. As per remarks, Applicants argued that (3) there is no teaching or suggestion in Wittmann that the QF object is in an active packet format.

10. As to point (3), it is rejected for similar reasons as mentioned in the previous Office Action. Furthermore, Wittmann discloses that RSVP can be easily extended to configure and control QoS filters, and RSVP provides the concept of classes that can be defined in order to extend RSVP to new resources, the format of the new RSVP class QoS filter (QF) is depicted in

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Figure 2(a) [ i.e. reservation packet is in an active packet format as claimed ] [ Figures 2(a); and section 3.2 "Signalling QoS Filter" ].

11. As per remarks, Applicants argued that (4) ANEP does not appear to teach or suggest an indicator that indicates that the active packet comprises executable code.

12. As to point (4), ANEP clearly discloses the format of ANEP header, and an active network node is capable of dynamically loading and executing programs, written in a variety of languages, wherein these programs are carried in the payload of an active network frame, the program is executed by a receiving node in the environment specified by the ANEP [ i.e. an indicator that indicates that the active packet comprises executable code as claimed ] [ section 1 "Introduction", and section 4 "Packet Format" ].

13. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittmann et al. (AMnet: Active Multicasting Network), hereafter Wittmann, in view of in view of Eichert et al. (US 6393474), hereafter Eichert in view of Alexander et al. "Active Network Encapsulation Protocol (ANEP)", hereafter ANEP, further in view of Nomura et al. (US 6930984).

Regarding **claims 1 and 9-11**, Wittmann discloses:

A method for reserving resources in a packet communication network, preferably an IP protocol network, this network being a hybrid network comprising both active nodes and passive nodes, the active nodes alone being capable of taking into account so-called active packets, that is to say those containing information related to a corresponding execution environment of these active nodes, an active data flow being a set of active packets having to be taken into account by one and the same execution environment (this network is disclosed in Fig. 1 as well as the first paragraph of section 2.1, and that it is an IP network containing IP nodes), the said method comprising the steps of:

a) sending on the network of a reservation packet containing a request for reservation of resources constituting an execution environment for an associated active data flow; (See Fig. 3, note the RSVP message with the QF Object inside)

b) receiving of the said reservation packet by an active node of the network (Fig. 3 shows the RSVP message being received at the RSVP Daemon); and

c) reservation of resources of the node according to the said request, (Note that in Fig. RVSP Daemon forwards the QF Object to the QF Daemon, which then programs the QoS Filter according to the QF object thereby reserving the filtering resources) the said method being characterized in that the said reservation packet is an active packet. (The RSVP packet containing the QF Object is by definition active as it will program the QoS filters within an active node. Packets carrying information intended for an active node are active packets. It is clear that the QF Object is information intended for an active node.)

Note that Figure 3 is the diagram of an IP active node operable to perform the steps above.

Wittmann discloses all of the limitations of claim 1 except for an indicator that indicates that the active packet comprises executable code or identifies a server from which an executable code is downloadable.

The general concept of an active node receiving code in an active packet reserving policy is well known in the art as taught by Eichert. (Col. 2, line 65 through Col. 3 line 1 which teaches that the active packet file may contain the policy code executable by the active network devices.)

The general concept of a policy reservation packet identifying a server and code to download and execute from the server is well known in the art as taught by Eichert. (Col. 2, lines 60-67, Col. 3 lines 1-3 teach that the code in the active packet may be stored on a distributed database and the active packet may just inform the device where the packet may be found.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of reserving resources of Wittmann and the general concept of an active node receiving code in an active packet reserving policy as taught by Eichert in order to decouple the policy services from the underlying node infrastructure.

Wittmann and Eichert teach all the limitations of claim 1 except that the packet has an indicator that the packet is active (i.e. that it contains executable code).

The general concept of a packet containing code to have an indicator of that state is well known in the art as taught by ANEP, which discloses a protocol which is used to encapsulate active information within an IP packet.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wittmann and Eichert to use the ANEP in order to allow co-existence of different execution environments and proper demultiplexing of received packets.

Wittmann, Eichert, and ANEP teach all the limitations of claim 1 except for wherein said resources constituting the execution environment comprise at least one of memory, passband size, and processing time.

The general concept of a reservation request reserving memory is well known in the art as taught by Nomura. (See Col. 2 lines 8-10 which disclose reserving memory using RSVP)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wittmann, Eichert, and ANEP in order to increase node efficiency.

Regarding **claim 2 as applied to claim 1**, Wittmann discloses:

the packet is in RSVP format. (Pg. 897, Col. 2, Section 3, lines 5-6 state that Amnet is based on RSVP.)

Regarding **claim 3 as applied to claim 1**, Wittmann discloses:

the packet may be a PATH type of the RSVP protocol. (Page 899, Col. 1, Paragraph 7: “A soft state is created and periodically refreshed by PATH or RESV messages. QF objects are included in these messages.”)

Regarding **claim 4 as applied to claim 1**, Wittmann discloses:

the reservation packet comprises an identifier of the said active data flow. (Page 889, Col. 1, “different filters serve different group members in the same active network node”, and “User data are directed directly to the corresponding QoS filter” clearly imply that there is a designation of a specific flow (i.e. to a specific group or member) that is to receive the filtering described by the QF object See Figure 4 (b) How Node D provides different quality data flows to separate receivers. Furthermore in an RSVP PATH packet inherently (See RFC 2205, the definition of RSVP for more information) includes a Sender Template which describes the a filter spec that is used to select the proper packets from all the packets sent on the network.)

Regarding **claim 5 as applied to claim 1**, Wittmann discloses:

the said reservation packet is provided for containing parameters for processing data contained in the said associated active data flow, this processing being a code

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executable by an active node of the network, (see Fig. 2, which shows the format for the parameters for processing the data in the data flow) and in that, in the case of these processing parameters being present, the step b) is followed by:

b 1) a step of loading by the said active node of the said corresponding executable code (See Fig. 3, the QF Daemon loads and configures the appropriate QoS-filters); and

b2) a step of execution of the said code by the said active node. (The filters are executed upon members of the group data flow that was reserved. See Fig. 3)

Regarding **claim 6**, Eichert teaches:

The general concept of an active node receiving code in an active packet reserving policy is well known in the art as taught by Eichert. (Col. 2, line 65 through Col. 3 line 1 which teaches that the active packet file may contain the policy code executable by the active network devices.)

Regarding **claim 7**, Eichert teaches:

The general concept of a policy reservation packet identifying a server and code to download and execute from the server is well known in the art as taught by Eichert. (Col. 2, lines 60-67, Col. 3 lines 1-3 teach that the code in the active packet may be stored on a distributed database and the active packet may just inform the device where the packet may be found.)

Regarding **claims 8 and 13 and as applied to claims 1 and 5**, Wittmann discloses:

after the step b1), a step of: b3) sending on the network by the said node of a confirmation of loading of the said executable code. (This step is inherent, as in the RSVP protocol when a node is finished with the setup requested by a PATH or RESV message then the message is

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forwarded onto the next node on the path. In the case of a failure, an error message is then forwarded in the opposite direction. If the node is unable to load the proper filters (i.e. executable code), the RSVP request will fail, and the error message will be returned to the originator of the PATH message. If the node is successful in reserving the resources (i.e. the filters necessary) then the path message is forwarded to the next node, thus the continuance of the PATH message to be forwarded means that the request succeeded at the previous nodes.)

Regarding **claim 14 as applied to claim 1**, Wittmann discloses:

The reservation packet comprises: a first identifier identifying the protocol for the data flow, a second identifier identifying the source/destination of the data flow, and a third identifier identifying the resources to be reserved. (An RSVP reservation request includes the destination of the dataflow. Fig. 2 discloses that the QF filter contains a protocol (In Fig. 2(b) the C-type is used to identify the video protocol used in the data flow) and also the resources to be used (slices per frame, whether to use color or black and white, the quality filter to provide)).

**16. Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wittmann, Eichert, ANEP and Nomura as applied to claim 1 above, and further in view of Applicant's Admitted Prior Art.

Wittmann, Eichert, ANEP and Nomura teach all the limitations of claim 12 except for a flag in the header of a packet that indicates that the packet is active or passive.

The general concept of using a flag in the header to indicate whether a packet is active or passive is old and well known in the art, as taught by Applicant's Admitted Prior Art. (See Applicant's Specification page 1 lines 29-33)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wittmann, Eichert, ANEP and Nomura with the general concept of using a flag in the header to indicate whether a packet is active or passive in order to expedite the processing of flows that do not require quality filters.

**17. Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wittmann, Eichert, ANEP and Nomura as applied to claim 1 above, and further in view of Deiss et al. (US 2005/0068952), hereafter Deiss.

Wittmann, Eichert, ANEP and Nomura disclose all the limitations of claim 1 except for the data flow's packets containing executable code.

The general concept of sending executable code in data packets is well known in the art as taught by Deiss. (see [0016] "they may include executable code forming an application to be executed by e.g., a microprocessor located within or associated with a receiver.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wittmann, Eichert, ANEP and Nomura with the general concept of sending executable code in data packets as taught by Deiss in order to allow more types of data to be transmitted on the network.

**18. Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wittmann, Eichert, ANEP and Nomura as applied to claim 1 above, and further in view of Simpson et al. (US 2003/0084151), hereafter Simpson.

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Wittmann, Eichert, ANEP and Nomura teach all the limitations of claim 16 except for reserving processing time.

The general concept of reserving processing time is well known in the art as taught by Simpson. (See [0004] which teaches reserving a time for processing)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wittmann, Eichert, ANEP and Nomura with the general concept of reserving processing time as taught by Simpson in order to increase capacity.

19. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wittmann, Eichert, ANEP and Nomura as applied to claim 1 above, and further in view of Frouin (US 2005/0018607).

Wittmann, Eichert, ANEP and Nomura teach all the limitations of claim 17 except for reserving passband size.

The general concept of reserving passband size is well known in the art as taught by Frouin. (see [0006] which teaches reserving passband size)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wittmann, Eichert, ANEP and Nomura with the general concept of reserving passband size as taught by Frouin in order to make network elements able to better manage application flows.

20. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wittmann, Eichert, ANEP and Nomura as applied to claim 1 above, and further in view of Frouin (US 2005/0018607) and further in view of Simpson et al. (US 2003/0084151), hereafter Simpson.

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Wittmann, Eichert, ANEP and Nomura teach all the limitations of claim 17 except for reserving passband size.

The general concept of reserving passband size is well known in the art as taught by Frouin. (see [0006] which teaches reserving passband size)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wittmann, Eichert, ANEP and Nomura with the general concept of reserving passband size as taught by Frouin in order to make network elements able to better manage application flows.

Wittmann, Eichert, ANEP, Nomura and Frouin teach all the limitations of claim 16 except for reserving processing time.

The general concept of reserving processing time is well known in the art as taught by Simpson. (See [0004] which teaches reserving a time for processing)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wittmann, Eichert, ANEP, Nomura and Frouin with the general concept of reserving processing time as taught by Simpson in order to increase capacity.

**21. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Coez et al. (US 6981044) also teaches the reservation of passband size. (See Col. 4, lines 42-47).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dustin Nguyen whose telephone number is (571)272-3971. The examiner can normally be reached on Monday through Friday 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dustin Nguyen/

Primary Examiner, Art Unit 2454